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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,148	04/09/2007	Satu Hagfors	128818	4980

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EXAMINER	
MOMPER, ANNA M	
ART UNIT	PAPER NUMBER
3657	

MAIL DATE	DELIVERY MODE
09/01/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/587,148	HAGFORS ET AL.	
	Examiner	Art Unit	
	ANNA MOMPER	3657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 June 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *4/27/2009, 6/05/2009* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *4/27/2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Amendment to the claims received 4/27/2009 has been entered. Claims 5 and 6 have been amended.

2. Amendment to the claims received 6/05/2009 has been entered. Claim 1 has been amended. Claim 11 has been added.

3. Amendments to the drawings received 4/27/2009 and 6/05/2009 have been entered.

Response to Arguments

4. Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 5, 7-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Inoue et al. (US 6,284,102 B1).

As per claim 1, Inoue et al. discloses a press belt (1) made from an elastomer material (Col. 5, Ln. 3-8) and forming a closed loop (Col. 4, Ln. 66-67) in a longitudinal direction (MD), a transverse direction (CMD) being perpendicular to the longitudinal direction, the belt having an inner surface (surface of layer 2) and an outer surface

(surface of layer 4) and three layers of reinforcement yarns (5, 6, 7) arranged inside the elastomer material (Fig. 2a, Fig. 2b, Fig. 3), an innermost yarn layer (5) closest to the inner surface extending in the longitudinal direction (MD, Fig. 1) and having adjacent reinforcement yarns (5) spaced in the transverse direction (CMD Fig. 1), and a middle yarn layer (6) extending in the transverse direction (CMD) and having adjacent reinforcement yarns spaced in the longitudinal direction (MD, Fig. 1), and an outermost yarn layer (7) closest to the outer surface of the press belt extending in the longitudinal direction (MD, Fig. 1) and adjacent reinforcement yarns spaced in the transverse direction (CMD, Fig. 1), which absorb energy and are restored from deformation with delay in connection with deformation (the reinforcement layers will absorb energy and will restore from deformation with some delay due to friction between layers of the belt).

As per claim 5, Inoue et al. discloses the reinforcement yarns of the outermost yarn layer are multifilament yarns twisted at a twist level (Col. 6, Ln. 14-23).

As per claim 7, Inoue et al. discloses the outer yarn layer is composed of a plurality of mutually parallel separate reinforcement yarns (Fig. 1, Fig. 2a, Fig. 2b, Fig. 3, Fig. 4).

As per claim 8, Inoue et al. discloses the outermost yarn layer is composed of one or more adjacent reinforcement yarns twisted spiral-like in the transverse direction of the press belt (Col. 6, Ln. 14-23).

As per claim 9, Inoue et al. discloses at least a part of the inner yarn layers is composed of a plurality of mutually parallel separate reinforcement yarns in the same layer (Fig. 1, Fig. 2a, Fig. 2b, Fig. 3, Fig. 4).

As per claim 10, Inoue et al. discloses the innermost yarn layer is composed of one or more spiral-like adjacent reinforcement yarns twisted in the transverse direction of the press belt (Col. 6, Ln. 14-23).

As per claim 11, Inoue et al. discloses the press belt is for a press associated with paper making (Col. 1, Ln. 16-20).

7. Claims 1, 5-11 are rejected under 35 U.S.C. 102(e) as being unpatentable over Ishino et al. (US 7,185,757 B2).

As per claim 1, Ishino et al. discloses a press belt (10) made from an elastomer material (Col. 6, Ln. 14-23) and forming a closed loop in a longitudinal direction, a transverse direction being perpendicular to the longitudinal direction, the belt having an inner surface (surface of layer 20) and an outer surface (surface of layer 60) and three layers of reinforcement yarns (40A, 40B, 50A) arranged inside the elastomer material (Fig. 1), an innermost yarn layer (40A) closest to the inner surface extending in the longitudinal direction (Fig. 1, Fig. 4) and having adjacent reinforcement yarns spaced in the transverse direction (Fig. 1, Fig. 4), and a middle yarn layer (40B) extending in the transverse direction (Fig. 1, Fig. 4) and having adjacent reinforcement yarns spaced in the longitudinal direction (Fig. 1, Fig. 4), and an outermost yarn layer (50A) closest to the outer surface of the press belt extending in the longitudinal direction (Fig. 1, Fig. 4) and adjacent reinforcement yarns spaced in the transverse direction (Fig. 1, Fig. 4), which absorb energy and are restored from deformation with delay in connection with deformation (the reinforcement layers will absorb energy and will restore from deformation with some delay due to friction between layers of the belt).

As per claim 5, Ishino et al. discloses the reinforcement yarns of the outermost yarn layer are multifilament yarns twisted at a twist level (Col. 7, Ln. 4-10).

As per claim 6, Ishino et al. discloses the reinforcement yarns of the inner yarn layer (40A) are multifilament yarns (Col. 6, Ln. 24-32), the reinforcement yarns of the outermost yarn layer are twisted at a higher twist level than the former (Table located in Col. 9-12).

As per claim 7, Ishino et al. discloses the outer yarn layer is composed of a plurality of mutually parallel separate reinforcement yarns (Fig. 1, Fig. 4).

As per claim 8, Ishino et al. discloses the outermost yarn layer is composed of one or more adjacent reinforcement yarns twisted spiral-like in the transverse direction of the press belt (Col. 7, Ln. 4-10).

As per claim 9, Ishino et al. discloses at least a part of the inner yarn layers is composed of a plurality of mutually parallel separate reinforcement yarns in the same layer (Fig. 1, Fig. 4).

As per claim 10, Ishino et al. discloses the innermost yarn layer is composed of one or more spiral-like adjacent reinforcement yarns twisted in the transverse direction of the press belt (Col. 6, Ln. 24-32).

As per claim 11, Ishino et al. discloses the press belt is for a press associated with paper making (Col. 1, Ln. 5-8).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue et al. (US 6,284,102 B1).

As per claims 2 and 3, Inoue et al. discloses the optimization of adjusting the number of yarns wound in the inner and outer layers, wherein increasing the density of the yarn allows for increased bending and tensile strength. It would have been obvious to one of ordinary skill in the art to modify the belt of Inoue et al. to adjust the number of yarns or the density of yarns in the outer layer, thus resulting in an overall flexibility change with regards to the middle layer, in order to optimize for a desired bending and tensile strength, since, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

11. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue et al. (US 6,284,102 B2) in view of Steiner et al. (US 6,908,532 B2).

As per claim 4, Inoue et al. fails to explicitly disclose the material and/or structure of the reinforcement yarns of the innermost yarn layer are more flexible than the reinforcement yarns of the outermost yarn layer.

Steiner et al. discloses a press belt wherein two layers of reinforcement cords (14, 16) are disposed perpendicular to each other, and wherein a first layer comprises a plurality of cords (14) disposed parallel to each other at a first distance (a1) and wherein a second layer comprises a plurality of cords (16) disposed parallel to each other at a second distance (a2) and wherein the second distance (a2) is less than the first distance (a1) resulting in the first layer of cords (14) being less dense than the second layer of cords (16) and thus a more flexible layer of cords (14) when the two layers of cords (14 and 16) are made of the same material.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the belt of Inoue et al. to include the innermost yarn layer being less dense and more flexible than the middle yarn layer disposed perpendicular to the innermost yarn layer, as taught by Steiner et al. for the purpose of improving belt life (Col. 2, Ln. 1-3).

12. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue et al. (US 6,284,102 B1) in view of Nakanishi et al. (US 5,259,822).

Inoue et al. discloses the reinforcement yarns of the inner yarn layer are multifilament yarns (Col. 6, Ln. 14-23), however fails to explicitly disclose the reinforcement yarns of the outermost yarn layer are twisted at a higher twist level than the former.

Nakanishi et al. discloses a rubber belt (A) wherein the twist multiplier (K) of the reinforcement cord (7) is chosen to allow for a desired balance of maintainability of plessley and modulus of elasticity (Fig. 4).

It would have been obvious to one of ordinary skill in the art to modify the belt of Inoue et al. to adjust the twist level of the inner and outermost yarn layers, in order to optimize for desired maintainability of plessley and modulus of elasticity, as taught by Nakanishi et al., since, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller,* 105 USPQ 233.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANNA MOMPER whose telephone number is (571)270-5788. The examiner can normally be reached on M-F 6:00-3:30 (First Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bradley T King/
Primary Examiner, Art Unit 3657

am